

Wisconsin Hepatitis Strategic Plan

**Wisconsin Department of Health and Family Services
Division of Public Health
Bureau of Communicable Diseases**

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Preface

The Wisconsin Hepatitis Strategic Plan was developed by a 32-member workgroup whose areas of expertise included hepatitis, public health, epidemiology, AIDS/HIV, immunization, sexually transmitted diseases, occupational health, environmental health, gastroenterology, pediatrics, advanced practice nursing, infection control, clinical laboratories, health care finance, public education, health care provider education, drug treatment, corrections, consumer advocacy, and blood collection.

The workgroup met in three facilitated half-day meetings in July, September and October 2002. Prior to the first meeting of the workgroup, state hepatitis program experts identified underlying risk factors for hepatitis A, B and C based on the literature, experience and statewide data. Workgroup members then gave their expert opinions via ballot on how much each risk factor currently contributes to the occurrence of each type of hepatitis. During the meetings, the workgroup identified interventions for the most important risk factors and used a logic model framework to organize ideas, develop measurable objectives and identify implementation activities. The Plan was drafted by DHFS staff and sent to the workgroup members for review and comment. The draft Plan was also sent to a group of external reviewers, hepatitis experts who had not participated in the planning process, for broader review and comment.

The planning process used to develop the Wisconsin Hepatitis Strategic Plan was supported by a grant from the Council of State and Territorial Epidemiologists (CSTE). The CSTE awarded funds to the Wisconsin Department of Health and Family Services (DHFS) to develop a written plan to prevent, detect and control viral hepatitis in Wisconsin. For assistance in implementing this Plan, please contact the DHFS hepatitis experts listed below:

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Dear Colleague:

I am very pleased to introduce you to the Wisconsin Hepatitis Strategic Plan. I believe you will find this Plan to be a very timely and important document, in part because viral hepatitis infections significantly impact the health of Wisconsin residents. During 1999-2001, an annual mean of 106 cases of hepatitis A, 583 cases of hepatitis B (of which 49 were acute) and 2,762 cases of hepatitis C were reported in Wisconsin. Additionally, during 1999-2000, more than 125 deaths in Wisconsin were attributed to hepatitis. This Plan includes goals to decrease the incidence of hepatitis A, B and C infections and limit the complications of hepatitis-related liver disease in Wisconsin. The Plan also establishes measurable objectives and describes activities that should be undertaken or continued to achieve these objectives.

Hepatitis A virus is typically transmitted to adult family members by young children with inapparent infections. Although hepatitis A is usually a self-limiting illness, a young Wisconsin parent developed a fatal case of fulminant hepatitis A in 2002. Achieving our hepatitis A disease reduction goal will require implementation of a vaccination strategy that produces high levels of immunity in children.

Hepatitis B vaccine has been required by administrative rule for children in Wisconsin day care centers and schools since 1997, and all grades K-12 will be included in this requirement during the 2003-04 school year. The incidence of hepatitis B will be reduced greatly as these immunized school children enter young adulthood when risks of hepatitis B virus acquisition typically increase. However, in addition to child and adolescent vaccination, achieving our hepatitis B disease reduction goal will require that health care and public health providers identify and vaccinate adults who are at risk of acquiring hepatitis B virus infection.

Hepatitis C virus (HCV) infections are among the most frequently reported communicable diseases in Wisconsin. Because many are still unaware of their HCV infections, identifying infected persons must be a major focus of a comprehensive prevention strategy. Achieving our goal of limiting complications of HCV-related liver disease will require that medical facilities, HIV counseling, testing and referral sites, sexually transmitted disease clinics, correctional facilities, drug treatment programs, community health centers and family planning clinics identify and test persons at risk of HCV infection.

I wish to gratefully acknowledge the group of experts from within and outside the Division of Public Health (DPH) who helped develop this Plan, and the Council of State and Territorial Epidemiologists for providing the grant that supported the planning process.

Introductory Letter

Please use this Plan to develop programs, support grant requests, set programmatic priorities and identify activities that should be undertaken to address the occurrence, prevention and control of hepatitis in Wisconsin. For assistance in implementing this Plan, please contact one of the DPH hepatitis experts listed in the preface of this document.

Sincerely,

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EXECUTIVE SUMMARY

Background

The Wisconsin Hepatitis Strategic Plan (the Plan) will assist the Department of Health and Family (DHFS) Hepatitis Programs in their mission to protect and promote the health of state residents by decreasing transmission of hepatitis A, B and C and limiting the complications of hepatitis-related liver diseases. The Plan was developed by a Workgroup composed of 32 experts from state and local public health (including epidemiology, AIDS/HIV, immunization, sexually transmitted diseases, occupational health, and environmental health); gastroenterology; pediatrics; advanced practice nurse practitioners; infection control; clinical laboratorians; health care finance; general public and health care provider education; drug treatment; corrections; consumer advocacy; and blood collection. The planning process occurred from February 2002 through December 2002 and was supported by a grant from the Council of State and Territorial Epidemiologists (CSTE). The CSTE awarded funds to the State of Wisconsin to develop a written plan to prevent, detect and control viral hepatitis in Wisconsin.

Goals

The goals of the Plan are to reduce the reported 2010 incidence of acute hepatitis A, hepatitis B and hepatitis C infections by 50% from current levels. The US Department of Health and Human Services' *Healthy People 2010* contains similar objectives. An additional goal of the Plan is to reduce the projected number of hepatitis C-related liver transplants by 5%, as a measure of success in reducing complications of hepatitis-related liver disease.

Objectives

There are 16 objectives in the Plan: 4 overarching objectives address more than one type of hepatitis, 3 address hepatitis A, 3 address hepatitis B, and 6 address hepatitis C. The remainder of this Executive Summary places the objectives of the Plan in context and describes how they will be achieved.

Overarching Objectives

- 1. Increase the proportion of persons diagnosed with hepatitis who are reported to the local health department and the DHFS.**
- 2. Develop and make hepatitis epidemiologic summary reports available to health care providers, policy makers and other interested persons.**

Surveillance

Diagnosed or suspect cases of hepatitis A, B and C must be reported to the local health department (LHD) under Wisconsin Administrative Rule HFS 145. LHDs follow-up cases to provide health education, identify a source of infection, determine risk of transmission, and implement control measures to prevent spread and reduce complications of hepatitis-related liver disease. The Wisconsin Hepatitis Programs monitor hepatitis incidence, and provide consultation, technical assistance and biologicals as needed for outbreak control. A comparison of reports of hepatitis infections received from laboratories with reports received from health care providers suggests that provider reporting of hepatitis infections is incomplete. Additionally, readily accessible information on the epidemiology of hepatitis in Wisconsin is needed by health care providers, policy makers and the general public to increase awareness of the problem and guide planning and program evaluation activities.

These objectives will be achieved by educating health care providers, laboratories and other reporting sources on hepatitis reporting roles and responsibilities, broadening the scope of surveillance to include risk factors, co-infection rates, and hepatitis-associated transplants and deaths, and by preparing and making available hepatitis epidemiologic summary reports to health care providers, community organizations and other interested persons in electronic and print format.

3. Increase the proportion of public sector sites that offer hepatitis A vaccine and hepatitis B vaccine to high risk clients.

Adult Vaccination

Although hepatitis A and hepatitis B vaccines have been recommended for high risk adults since 1995 and 1982 respectively, studies continue to show low vaccination coverage among several high-risk groups, including men who have sex with men (MSM), and patients with sexually transmitted diseases (STDs) (Mast, 1998, Khan, 2002). A major deterrent to hepatitis B vaccination of high risk persons other than health care workers has been a lack of public sector vaccination programs (CDC, 1990, Mast, 1998). A recent analysis of patients with acute hepatitis B virus (HBV) infection determined that over half reported treatment for a STD or incarceration in a prison or jail prior to their illness. This suggests that more than half of HBV infections might be prevented through routine hepatitis B immunization in public sector sites, specifically STD clinics and correctional health programs (Goldstein, 2002). The Workgroup identified sexual contact with someone who has HBV infection as the most important risk factor for HBV transmission.

This objective will be achieved by identifying sources of adult hepatitis vaccine, developing adult hepatitis immunization policies and procedures and patient education materials, and training public sector site staff on integrating hepatitis immunization activities into ongoing programs. Public sector sites are defined as STD clinics, AIDS/HIV counseling, testing and referral sites, LHDs, drug treatment programs, correctional health programs, family planning clinics and community health centers.

4. Increase the proportion of health care providers who identify high risk patients and provide those patients hepatitis A vaccine, hepatitis B vaccine and hepatitis C testing.

Provider Education

Hepatitis A and hepatitis B high risk adult vaccination by providers in the private sector should also be promoted because many high risk adults may not be accessed through public sector programs. Studies that find low hepatitis vaccine coverage note that a high percentage of participants have and utilize a regular source of health care (MacKellar, 2001, Khan, 2002). However, targeted vaccination programs have been difficult to implement because persons may not self-identify as having a high risk behavior or may not perceive themselves to be at high risk. In addition, health care providers often do not ask about risk behaviors during health care visits, resulting in missed opportunities to vaccinate persons in high risk groups (CDC, 1998). Similarly, health care providers often do not routinely ask patients about risk factors for hepatitis C virus (HCV) infection, suggesting that persons with HCV infection are being under-diagnosed (Shehab, 2002).

This objective will be achieved by developing and conducting a multifaceted campaign to educate health care providers on hepatitis detection and prevention among high risk adults that includes direct mailings, a state-wide hepatitis conference, posting hepatitis epidemiologic and programmatic information on the DHFS web site and the Health Alert Network (HAN), and publishing articles on hepatitis in professional journals and newsletters.

Hepatitis A Objectives

- 5. Reduce the annual number of reported HAV cases associated with day care.**
- 6. Increase the proportion of children aged 24 – 36 months who have received at least 1 dose of hepatitis A vaccine.**

The Advisory Committee on Immunization Practices (ACIP) has recommended hepatitis A vaccination for children who live in areas where rates of hepatitis A virus (HAV) infection are at least twice the national average. Implementation of these recommendations appears to be resulting in dramatic declines in the overall incidence of disease in those areas (Bell 2002). The Wisconsin DHFS Immunization Program currently provides federally purchased hepatitis A vaccine to LHDs and other health care providers for children who meet Vaccines for Children (VFC) criteria and live in Milwaukee City or receive health care from tribal clinics. The federal 2010 hepatitis A disease reduction objective will not be achieved until a vaccination strategy is implemented that produces high levels of immunity in children (USDHHS, 2000). The Workgroup identified household or childcare contact with a case of HAV infection as the most important risk factor for HAV transmission.

These objectives will be achieved by recommending state-wide hepatitis A vaccination of children and adolescents and by adding hepatitis A vaccine to the list of vaccines required for children to attend day care if the ACIP recommends routine childhood hepatitis A vaccination and if federally-purchased hepatitis A vaccine is made available for this purpose.

- 7. Reduce the annual number of reported HAV cases associated with contaminated food or water in Wisconsin.**

In addition to vaccination, HAV transmission is prevented by such measures as hand hygiene, safe food handling and surface disinfection. This objective will be achieved by educating persons in high risk settings, regulating day care centers and food establishments, and following-up reported cases of HAV infection to implement control measures to prevent spread.

Hepatitis B Objectives

- 8. Increase the proportion of students in grades kindergarten through 12 who receive the minimum number of doses of required vaccines, including hepatitis B vaccine, for their age/grade level.**
- 9. Increase the proportion of children in Milwaukee County aged 19 to 35 months who have received three doses of hepatitis B vaccine.**
- 10. Increase the proportion of infants born to locatable HBsAg-positive mothers who receive HBIG and complete the hepatitis B vaccine series by 6-8 months of age.**

In a series of statements in the 1980s and 1990s, the ACIP recommended pre-exposure hepatitis B vaccination for high risk adults, all infants, high risk adolescents and, finally, all adolescents. In 1997, Wisconsin added hepatitis B vaccine to the list of vaccines required by Wisconsin Administrative Rule Administrative Rule HFS 144 for children in day care centers and schools. All grades will be covered by this requirement in 2004. HBV infection will be reduced greatly as the age groups covered by universal infant and adolescent vaccination efforts enter young adulthood, a period when the risk of HBV infection increases (USDHHS, 2000).

These objectives will be achieved by supplying federally-purchased hepatitis B vaccine to LHDs and other health care providers through the VFC Program, educating parents and providers on the hepatitis B vaccine requirements, encouraging schools to use the Wisconsin Immunization Registry (WIR), or another system that exchanges data with the WIR, to record and track student immunizations, enforcing Administrative Rule HFS 144 Immunization of Students, and updating and distributing state hepatitis guidelines to LHDs.

Hepatitis C Objectives

- 11. Increase knowledge and understanding of hepatitis among youth.**
12. Increase knowledge and understanding of hepatitis among IDUs.

HCV is primarily transmitted by percutaneous exposure to blood. Injecting drug use (IDU) currently accounts for 60% of HCV transmission in the US, and infection is acquired rapidly after initiation of injecting (CDC, 1999). Additionally, hepatitis knowledge has been shown to be significantly lower than HIV knowledge among IDUs in three major metropolitan areas (Heimer, 2002). The Workgroup identified percutaneous exposure to HCV through injecting drug use as the most important risk factor for HCV transmission. Unlike HAV and HBV infection, HCV infection is not vaccine-preventable. Measures that prevent HCV transmission include donor screening, viral inactivation of products derived from human plasma and health education and risk reduction measures.

These objectives will be achieved by developing and distributing HCV prevention education materials to the general public, to youth in high risk settings, and to IDUs; funding a state-wide AIDS/HIV-STD-hepatitis C information and referral line, integrating HCV prevention information into DHFS Bureau of Mental Health and Substance Abuse-affiliated services and publications, assuring state-wide establishment of safe needle disposal programs and educating state policy makers with science-based information on programs that increase IDUs' access to sterile syringes and clean drug preparation equipment.

- 13. Increase the proportion of persons with HCV infection who have been diagnosed.**

Because of the large number of people with chronic HCV infection, identification of infected persons must be a major focus of a comprehensive prevention strategy (USDHHS, 2000). Identification of persons with HCV infection provides infected persons opportunity to obtain information on preventing additional liver damage and spread of HCV to others; hepatitis A and hepatitis B vaccines; and medical evaluation.

This objective will be achieved by supporting Wisconsin State Laboratory of Hygiene (WSLH) capacity to provide HCV testing services to public sector sites, developing procedures to guide uniform integration of HCV screening, counseling, testing and referral services and by providing training and technical assistance to public sector sites to support integration of HCV testing activities.

14. Increase the proportion of persons with chronic HCV infection who have access to medical care.

Persons with HCV infection should be medically evaluated to assess biochemical evidence of chronic liver disease, severity of disease and possible need for treatment. The percentage of persons with HCV infection who have access to medical care in Wisconsin is not known.

This objective will be achieved by surveying a sample of persons with HCV infection to determine access and barriers to medical care; collaborating with the Division of Health Care Financing to assure that Medicaid and Badger Care cover medical management of HCV infection as a standard of care, exploring the feasibility of developing an insurance mandate that would cover the treatment of hepatitis C; identifying funding sources for a health insurance premium subsidy program for low income un- and under-insured persons with HCV infection and creating such a program when funds become available.

15. Establish a plan and an ongoing system to measure and improve the quality of HCV prevention and health care provided by LHDs and other community providers.

Compared to HAV and HBV, laboratory capacity to identify HCV antibodies and RNA is relatively recent. The treatment of choice for HCV infection has changed three times in the past five years and a national survey of primary care physicians has identified deficits in knowledge regarding treatment and patient referral criteria, and in practice regarding screening patients for HCV risk factors (Shehab, 2001).

This objective will be achieved by creating a statewide advisory group to review and guide hepatitis activities in Wisconsin, surveying a sample of persons with HCV infection who have been followed-up by LHDs to determine compliance with recommended prevention and case management guidelines, and conducting chart reviews of clients seen at public facilities to determine compliance with recommended risk assessment, testing, referral and treatment guidelines.

16. Increase the proportion of treatment-eligible HCV-positive persons who receive treatment.

Treatment is recommended for persons with chronic hepatitis C who are at greatest risk for progression to cirrhosis. The current treatment of choice, pegylated interferon and ribavirin, results in a sustained virological response for more than 40% of patients with genotype 1 and 80% of patients with genotype 2 or 3 (70% of HCV infections in the U.S. are genotype 1) (Manns, 2001). The manufacturers of pegylated interferon and ribavirin, Schering and Roche, currently supply free drugs to persons who are uninsured and low income. However, drug assistance programs do not supply drugs to uninsured persons with modest incomes or to insured persons with high deductibles. In addition to cost, active psychiatric illness, active drug or alcohol use, decompensated liver disease and

certain medical conditions are barriers to treatment. Recent evaluations of HCV-HIV coinfecting persons and veterans determined that only 30% were eligible for treatment (Fleming, 2003, Muir, 2002). According to one simulation model, antiviral therapy reduces disease burden from HCV infection by 5% (Sagmeister, 2002). It is possible that continued improvements in antiviral therapy against HCV infection may ultimately decrease the number of patients needing liver transplantation (Ahmed, 2001).

This objective will be achieved by surveying a sample of persons with HCV infection to determine treatment eligibility and access to medications; developing and distributing a resource list of physicians who treat persons with HCV infection; collaborating with the Division of Healthcare Financing to assure that Medicaid and Badger Care cover treatment of HCV infection as a standard of care; exploring the feasibility of developing an insurance mandate that would cover the treatment of hepatitis C; identifying funding resources for a HCV drug assistance program to provide access to HCV medications for low income un- or underinsured persons with HCV infection, and creating such a program when funds become available.

Timeline

The intent of the Plan is to achieve the objectives in 3 years. Progress toward meeting the objectives will be evaluated annually, and the Plan will be updated in 2006 to reflect achievement of objectives, medical advances and changes in policy and resource availability.

MISSION, VISION AND GUIDING PRINCIPLES

Mission

The mission of the Wisconsin DHFS Hepatitis Programs is to protect and promote the health of Wisconsin residents by decreasing transmission of hepatitis A, B and C and limiting the complications of hepatitis-related liver disease.

Vision

The Hepatitis Strategic Planning Workgroup envisions that accomplishment of this mission will result in:

- A decrease in the transmission of hepatitis viruses;
- An increase in hepatitis A and B immunization levels among children and adults;
- An increase in knowledge of the epidemiology of viral hepatitis in Wisconsin among health care providers and health professions students;
- An increase in awareness among health care providers, including laboratorians, of their role in the prevention, detection, management and treatment of hepatitis;
- An increase in understanding of hepatitis, and available and needed resources among the public, affected populations and policy makers;
- An increase in resources to identify and treat persons with chronic hepatitis;
- Improved coordination of care for persons with chronic hepatitis who are being released into the community from institutions such as prisons, jails and mental health facilities; and
- Provision of guidelines for local health care providers on management of chronic hepatitis B and C viral infections.

Guiding Principles

- Prevention is the most effective public health strategy;
- Hepatitis prevention and treatment is a shared responsibility among the public and private sectors and the general public;
- Hepatitis infections have social and economic impact on families, communities and the health care system;
- Action steps and policies are based on principles and practices that are well-established in the biomedical, social and environmental sciences;
- Services that prevent hepatitis and the complications of hepatitis are integrated into the existing prevention and care infrastructure for AIDS/HIV, STD, LHD, family planning, school health, correctional health, occupational health, and private sector pediatric and adult health care services;
- Individuals' privacy and confidentiality is assured;
- The knowledge, expertise and experience that each planning group member contributes to the planning process are essential to the creation of a plan that is successful in achieving its mission;
- Incorporating the affected persons and groups in planning and implementing hepatitis prevention interventions and care services is critical; and
- Resources to prevent hepatitis and the complications of hepatitis-related liver disease are currently available and being utilized by some. However, additional resources for both patients and public and private sector health care agencies are needed to fully address the problem of hepatitis in Wisconsin.

GOALS

This section presents Wisconsin Hepatitis A, B and C morbidity reduction goals, measurement methods, baselines and targets. Comparable federal goals, objectives, baselines and targets from Healthy People 2010 are presented for reference.

Hepatitis A

Wisconsin Goal:	By 2010, reduce the reported incidence of HAV infections by 50%.
Evaluation method:	HAV case surveillance
Baseline (1999-2001 annual average):	2.1 cases/100,000 population
Target (2010):	1.05 cases/100,000 population
Federal Goal:	Prevent disease, disability and death from infectious diseases, including vaccine-preventable diseases.
Objective:	Reduce hepatitis A
Baseline (1997):	11.3 cases/100,000 population
Target (2010):	4.5 cases/100,000 population

Hepatitis B

Wisconsin Goal:	By 2010, reduce the reported incidence of acute HBV infections by 50%.
Evaluation method:	HBV case surveillance. Age-specific rate calculated as number of acute HBV infections reported among persons 20-44 years of age per 100,000 persons in Wisconsin 20-44 years of age.
Baseline (2001):	2 cases/100,000 population
Target (2010):	1 case/100,000 population
Federal Objective:	Reduce hepatitis B
Baseline (1997):	19-39 years: 22.1/100,000
Target (2010):	19-39 years: 3.75/100,000

Hepatitis C

Wisconsin Goal 1:	By 2010, reduce the reported incidence of acute HCV infections by 50%.
Evaluation method:	HCV case surveillance. The age-specific rate is calculated as the number of HCV infections reported among persons less than 25 years of age per 100,000 persons in Wisconsin less than 25 years of age.
Baseline (2002):	7.1/100,000 population
Target (2010):	3.5/100,000 population
Federal Objective:	Reduce hepatitis C
Baseline (1996):	2.4/100,000 population
Target (2010):	1.0/100,000 population
Wisconsin Goal 2:	By 2010, reduce the projected number of hepatitis C-related liver transplants by 5%.
Method:	Analysis of liver transplant data.
Baseline (2001):	26
Target (2010):	99

OUTCOME OBJECTIVES, EVALUATION AND MEASUREMENT

This section presents a complete list of Wisconsin Strategic Plan Objectives. Objectives 1-4 are overarching objectives that address more than one type of hepatitis; objectives 5-7 address hepatitis A; objectives 8-10 address hepatitis B and objectives 11-16 address hepatitis C.

Overarching Objectives

- | | |
|---------------------|--|
| Objective 1: | Increase the proportion of persons diagnosed with hepatitis who are reported to the DPH. |
| Evaluation method: | Comparison of laboratory-identified cases with reported cases. Additional potential sources of case information include hospital discharge and clinic utilization data. |
| Baseline: | To be determined. |
| Target: | 90% |
|
 | |
| Objective 2: | Develop and make hepatitis epidemiologic summary reports available to health care providers, policy makers and other interested persons. |
| Evaluation method: | Hepatitis data collection and analysis. |
| Baseline: | A surveillance summary of HCV infections has been developed. Surveillance summaries of HAV and HBV infections are needed. |
| Target: | Surveillance summaries of HAV, HBV and HCV infections are developed, published in the AIDS/HIV Update or other publications and posted on the DHFS web site. |
|
 | |
| Objective 3: | Increase the proportion of public sector sites that offer hepatitis A vaccine and hepatitis B vaccine to high risk clients. |
| Evaluation method: | Analysis of data from the Immunization Program's Vaccine Management Program (VACMAN) and public sector site surveys. |
| Baseline: | To be determined. |
| Target: | 75% increase. |
|
 | |
| Objective 4: | Increase the proportion of health care providers who identify high risk patients and provide those patients hepatitis A vaccine, hepatitis B vaccine and hepatitis C testing. |
| Evaluation method: | Pre- and Post provider surveys on self-reported practice, Medicaid audits. |
| Baseline: | To be determined. |
| Target: | 50% increase. |

Hepatitis A Objectives

Objective 5: **Reduce the annual number of reported HAV infections associated with day care.**

Evaluation method: HAV case surveillance
Baseline: 28 cases (1999-2001 annual average)
Target: 14 cases per year

Objective 6: **Increase the proportion of children aged 24 – 36 months who have received at least 1 dose of hepatitis A vaccine.**

Evaluation method: Children with at least one immunization in the Wisconsin Immunization Registry (WIR).
Baseline: 4%
Target: 40%

Objective 7: **Reduce the annual number of reported HAV infections associated with contaminated food or water in Wisconsin.**

Evaluation method: HAV case surveillance
Baseline: 5.7 cases (1999-2001 annual average)
Target: 2.8 cases per year

Hepatitis B Objectives

- Objective 8:** **Increase the proportion of students in grades kindergarten through 12 who receive the minimum number doses of required vaccines, including hepatitis B vaccine, for their age/grade level.**
Evaluation method: Wisconsin Immunization Program Annual School Assessment Reports
Baseline: 92%
Target: 94%
- Objective 9:** **Increase the proportion of children in Milwaukee County aged 19 to 35 months who have received three doses of hepatitis B vaccine.**
Evaluation method: National Immunization Survey data
Baseline (2001): 82%
Target: 90%
- Objective 10:** **Increase the proportion of infants born to locatable HBsAg-positive mothers who receive HBIG and complete the hepatitis B vaccine series by 6-8 months of age.**
Evaluation method: Perinatal Hepatitis B Prevention Surveillance
Baseline: 72% (2000 births):
Target: 90%

Hepatitis C

- Objective 11:** **Increase knowledge and understanding of hepatitis among youth.**
Evaluation method: Pre and Post surveys of youth through schools and out-of school settings
Baseline: To be determined.
Target: 50% improvement.
- Objective 12:** **Increase knowledge and understanding of hepatitis among IDUs.**
Evaluation method: Pre and Post surveys of IDUs through needle exchange programs and street outreach.
Baseline: To be determined.
Target: 50% improvement.
- Objective 13:** **Increase the proportion of persons with HCV infection who have been diagnosed.**
Evaluation method: HCV case surveillance
Baseline (Cumulative through 2002): 15% (14,000 cases). Assumes that the prevalence of HCV infection is Wisconsin (1.8% of the population or 90,000 persons) is the same as the prevalence of HCV infection in the U.S.
Target: 30% (30,000 cases)
- Objective 14:** **Increase the proportion of persons with chronic HCV infection who have access to medical care.**
Evaluation method: LHD case survey.
Baseline: To be determined.
Target: 50% improvement.
- Objective 15:** **Establish a plan and an ongoing system to measure and improve the quality of HCV prevention and health care provided by LHDs and other community providers.**
Evaluation method: Work product review.
Baseline: There is no system in place to measure the quality of HCV prevention and care.
Target: A state-wide hepatitis advisory group is created and reports on quality of HCV prevention and health care are written and available.
- Objective 16:** **Increase the proportion of treatment-eligible HCV-positive persons who receive treatment.**
Evaluation method: LHD survey, drug manufacturers' data, provider survey.
Baseline: To be determined.
Target: 50% increase.

IMPLEMENTATION PLAN: HEPATITIS A

This section presents the implementation plan to decrease the incidence of hepatitis A in Wisconsin. The activities in this plan are organized by categories that are roughly equivalent to 7 of the 12 Essential Public Health Services identified in Healthiest Wisconsin 2010, the Wisconsin State Health Plan. The categories are Surveillance, Immunization or Testing, Health Education and Risk Reduction, Regulation, Provider Education, Evaluation, and Access to Care. The activities within each category are further divided into two groups: new and ongoing. The new activities are those that should be undertaken to improve the prevention and control of hepatitis. The ongoing activities are those that have been set in place and must be continued to maintain the gains already achieved in the prevention and control of hepatitis. The related objectives are listed by number at the beginning of each activity category.

1. Surveillance

Related Objectives: 1, 2

Activities: New

- 1-a The Wisconsin Hepatitis Programs will conduct surveillance projects to determine the extent to which persons diagnosed with hepatitis are being reported to the DHFS.
- 1-b The Wisconsin Hepatitis Programs will prepare, post on the DHFS web site and the HAN, and distribute hepatitis A, B and C surveillance summaries annually to LHDs, health care providers, laboratories, advisory groups and interested community-based organizations. When data are available, the surveillance summaries will include information on risk factors, co-infection rates, vaccine usage and hepatitis-associated transplants and death.
- 1-c The Wisconsin Immunization Program will monitor and report hepatitis A and hepatitis B vaccine usage by public and private providers through the WIR.
- 1-d The Wisconsin Hepatitis Programs will implement an electronic system of hepatitis case reporting when system capabilities are available at the DHFS Bureau of Communicable Diseases (BCD), the Wisconsin State Laboratory of Hygiene (WSLH) and other laboratories. The electronic system of case reporting will be compliant with the requirements of the Health Insurance Portability and Accountability Act (HIPAA).

Activities: Ongoing

- 1-e The Wisconsin Hepatitis Programs will maintain and improve electronic databases of hepatitis reports received from LHDs, laboratories and other report sources.
- 1-f The Wisconsin Hepatitis Programs will inform LHDs of hepatitis cases that occur in their jurisdictions.

- 1-g The Wisconsin Hepatitis Programs will educate LHDs, health care providers and laboratories on hepatitis reporting roles and responsibilities.
- 1-h The Wisconsin Hepatitis Programs will monitor hepatitis incidence, provide consultation, technical assistance and biologicals as needed for outbreak control to LHDs and health care providers.

2. Immunization and Testing

Related Objectives: 3, 5, 6, 7

Activities: New

- 2-a. The Wisconsin Immunization Program will monitor Wisconsin and national HAV infection trends, particularly trends in states that are routinely providing hepatitis A vaccine to children.
- 2-b. The Wisconsin Immunization Program will request additional federally purchased hepatitis A vaccine from the National Immunization Program if supported by research and need.
- 2-c. The State Epidemiologist for Communicable Diseases and the Wisconsin Council on Immunization Practices (WCIP) will consider issuing a statement to vaccine providers recommending routine hepatitis A vaccination of all 2-21 year olds, if epidemiologically indicated and fiscally feasible.
- 2-d. If the Advisory Committee on Immunization Practices (ACIP) recommends routine childhood hepatitis A vaccination, the Wisconsin Immunization Program will initiate the process to add hepatitis A vaccine to the list of vaccines required under Administrative Rule HFS 144 for children to attend day care centers.
- 2-e. The BCD and the Bureau of Environmental Health will convene a study committee with representation from the food service industry to discuss hepatitis A vaccination of food-handlers. Strategies that could be considered include vaccinating long term employees, or those employed by schools and colleges or by large establishments.
- 2-f. The Wisconsin Immunization Program will estimate potential vaccine usage and identify a source or sources of hepatitis A and hepatitis B vaccine for adult high risk vaccination initiatives in public sector sites.
- 2-g. The Wisconsin Immunization Program will develop public sector adult immunization policies and prioritize sites for program implementation.

- 2-h. The Wisconsin Immunization Program and other BCD Programs (e.g., the STD and AIDS/HIV Programs) will collaboratively develop hepatitis A and hepatitis B vaccination policies and procedures for the respective sites.
- 2-i. The Wisconsin Immunization Program, in consultation with the public sector sites, will provide training on hepatitis A and B vaccination integration to the respective sites.
- 2-j. The Wisconsin Immunization Program will enroll and train public sector site staff on the use of the WIR.
- 2-k. Public sector sites that receive vaccine from the Wisconsin Immunization Program will use the WIR, or another system that exchanges data with the WIR, to record and track client immunizations.

Activities: Ongoing

- 2-l. The Wisconsin Immunization Program will continue to supply federally purchased hepatitis A vaccine to public and private providers enrolled in the Vaccines for Children (VFC) Program for children living in identified counties or communities where rates of HAV infection exceed the national average.

3. Health Education and Risk Reduction

Related Objective: 7

Activity: Ongoing

- 3-a. The Food Handler Certification course conducted by technical colleges and the Wisconsin Restaurant Association will continue to educate food handlers on HAV infection and associated prevention measures.
- 3-b. The Department of Public Instruction and the DHFS will implement the Wisconsin School Food Safety Program. Among the objectives of the Program are providing food safety awareness education to food service staff, students, faculty and parents including effective hand washing practices.

4. Regulation

Related Objective: 1, 5, 7

Activities: Ongoing

- 4-a. Health care providers, hospitals and laboratories will comply with Administrative Rule HFS 145 Control of Communicable Diseases by reporting hepatitis cases to LHDs.

- 4-b. LHDs will follow-up on and report cases of hepatitis to the DPH, as authorized in Administrative Rule HFS 145, to provide health education, identify source of infection, determine risk of transmission, and implement control measures to prevent spread.
- 4-c. DHFS day care regulators will continue to enforce Administrative Rule HFS 45 Family Day Care Centers for Children and Administrative Rule HFS 46 Group Day Care Centers for Children, that require child care providers to wash hands before and after each diapering and that diapering surfaces be cleaned and disinfected after each diapering.
- 4-d. LHD and regional sanitarians will continue to enforce Administrative Rule HFS 196 Restaurants, Appendix Wisconsin Food Code/ATPC 75 Appendix -Wisconsin Food Code, including “no bare hand contact with ready-to-eat foods” and routinely asking restaurant managers questions about sick leave and hand washing policies.

5. Provider Education

Related Objectives: 4

Activities: New

The Wisconsin Hepatitis Programs will collaboratively develop and conduct an education campaign for health care providers on hepatitis prevention and detection among high risk adults that will include the following activities:

- 5-a. Sending a mailing to providers that will include:
 - Policy statements and reference materials on high risk adult hepatitis A and B vaccination and hepatitis C testing from state and national advisory groups;
 - Annual hepatitis A, B and C surveillance summaries for Wisconsin;
 - Patient education materials on hepatitis A and B vaccination and hepatitis C testing;
 - Interpretation of hepatitis serologic test results; and
 - Hepatitis case reporting requirements.
- 5-b. Collaborating with the University of Wisconsin-Madison Medical School to organize and present a statewide hepatitis conference to update health care providers on current issues related to hepatitis epidemiology, prevention, detection and treatment.

- 5-c. Posting annual hepatitis A, B and C surveillance summaries on the DHFS web site and the HAN.
- 5-d. Publishing articles on hepatitis epidemiology and programs in professional journals and newsletters.
- 5-e. Providing hepatitis information in the context of hospital grand rounds and professional conferences.

6. Evaluation

Related Objectives: 5, 6, 7

Activities: New

- 6-a. The Wisconsin Hepatitis Programs will work with hepatitis partners to create a statewide advisory group to review and guide hepatitis surveillance, prevention, detection and treatment activities in Wisconsin.

IMPLEMENTATION PLAN: HEPATITIS B

This section presents the implementation plan to decrease the incidence of hepatitis B in Wisconsin. The activities in this plan are organized by categories that are roughly equivalent to 7 of the 12 Essential Public Health Services identified in Healthiest Wisconsin 2010, the Wisconsin State Health Plan. The categories are Surveillance, Immunization or Testing, Health Education and Risk Reduction, Regulation, Provider Education, Evaluation, and Access to Care. The activities within each category are further divided into two groups: new and ongoing. The new activities are those that should be undertaken to improve the prevention and control of hepatitis. The ongoing activities are those that have been set in place and must be continued to maintain the gains already achieved in the prevention and control of hepatitis. The related objectives are listed by number at the beginning of each activity category.

1. Surveillance

Related Objectives: 1, 2

Activities: New

- 1-a The Wisconsin Hepatitis Programs will conduct surveillance projects to determine the extent to which persons diagnosed with hepatitis are being reported to the DPH.
- 1-b The Wisconsin Hepatitis B and Hepatitis C Programs will establish and implement a system to routinely collect, summarize and report HBV and HCV mortality data.
- 1-c The Wisconsin Hepatitis B and Hepatitis C Programs will establish and implement a system to routinely collect, summarize and report data on HBV- and HCV-related liver transplants.
- 1-d The Wisconsin Immunization Program will monitor and report hepatitis A and B vaccine usage by public and private providers through the Wisconsin Immunization Registry (WIR).
- 1-e The Wisconsin Hepatitis Programs will prepare, post on the Department web site and the HAN, and distribute hepatitis A, B and C surveillance summaries annually to LHDs, health care providers, laboratories, advisory groups and interested community-based organizations. When data are available, the surveillance summaries will include information on risk factors, co-infection rates, vaccine usage and hepatitis-associated transplants and death.
- 1-f The Wisconsin Hepatitis Programs will implement an electronic system of hepatitis case reporting when system capabilities are available at the BCD, the WSLH and other laboratories. The electronic system of case reporting will be compliant with the requirements of the Health Insurance Portability and Accountability Act.

Activities: Ongoing

- 1-g The Wisconsin Hepatitis Programs will maintain and improve electronic databases of hepatitis reports received from LHDs, laboratories and other report sources.
- 1-h The Wisconsin Hepatitis Programs will inform LHDs of hepatitis cases that occur in their jurisdictions.
- 1-i The Wisconsin Hepatitis Programs will educate LHDs, health care providers and laboratories on hepatitis reporting roles and responsibilities.
- 1-j The Wisconsin Hepatitis Programs will monitor hepatitis incidence, provide consultation, technical assistance as needed to LHDs and health care providers.

2. Immunization and Testing

Related Objective: 3, 8, 9

Activities: New

- 2-a. The Wisconsin Immunization Program will estimate potential vaccine usage and identify a source or sources of hepatitis A and hepatitis B vaccine for adult high risk vaccination initiatives in public sector sites. If vaccine is available, the following activities will occur:
 - The Wisconsin Immunization Program will develop public sector adult immunization policies and prioritize sites for program implementation.
 - The Wisconsin Immunization Program and other DPH Programs (e.g., the STD and AIDS/HIV Programs) will collaboratively develop hepatitis A and hepatitis B vaccination procedures for the respective sites.
 - The Wisconsin Immunization Program, in consultation with the public sector sites, will provide training on culturally competent hepatitis A and B vaccination integration to the respective sites.
 - The Wisconsin Immunization Program will enroll and train public sector site staff on the use of the WIR.
 - Public sector sites that receive vaccine from the Wisconsin Immunization Program will use the WIR, or another system that exchanges data with the WIR, to record and track client immunizations.

Activities: Ongoing

- 2-b. The Wisconsin Immunization Program will continue to supply federally purchased hepatitis B vaccine to public providers and private providers enrolled in the

Vaccines for Children (VFC) program for administration to children 0-18 years of age.

- 2-c. The Wisconsin Immunization Program will inform schools and day care centers of hepatitis B vaccine requirements for the current school year through the Wisconsin School Immunization Assessment booklet.
- 2-d. Schools and day care centers will inform parents of immunization requirements by, for example, including information in school registration packets and presenting information at parent-teacher association meetings.
- 2-e. The Wisconsin Immunization Program will encourage and support schools' use of the WIR, or another system that exchanges data with the WIR, to record and track student immunizations, including hepatitis B immunizations.
- 2-f. The Wisconsin Immunization Program will explore with the Department of Regulation and Licensing the possibility of informing newly licensed providers about the VFC Program.
- 2-g. Providers of obstetric care will screen all pregnant women for hepatitis B surface antigen (HBsAg), as recommended by the ACIP and the American College of Obstetricians and Gynecologists.
- 2-h. LHDs will follow-up HBsAg-positive women and their infants to assure appropriate and timely preventive treatment with hepatitis B immune globulin (HBIG) and hepatitis B vaccine and will report required data elements to the Wisconsin Immunization Program.
- 2-i. The Wisconsin Immunization Program will reimburse LHDs on a per-capita basis for providing services to HBsAg-positive pregnant women, their infants and their families.

4. Regulation

Related Objectives: 1, 8, 9

Activities: New

- 4-a. The DHFS will propose a revision of Administrative Rule HFS 173 Tattooing and Body Piercing to require practitioners to obtain bloodborne pathogen and sterilization training to maintain their existing license and for new practitioners to obtain such training before receiving a license.

Activities: Ongoing

- 4-b. Health care providers, hospitals and laboratories will comply with Administrative Rule HFS 145 Control of Communicable Diseases by reporting hepatitis cases to LHDs.
- 4-c. LHDs will follow-up and report cases of hepatitis to the DHFS, as authorized in Administrative Rule HFS 145, to provide health education, identify source of infection, determine risk of transmission, and implement control measures to prevent spread and reduce complications of hepatitis-related liver disease.
- 4-d. Schools, day care centers and LHDs will continue to enforce Administrative Rule HFS 144 Immunization of Students.
- 4-e. LHD and State sanitarians will continue to enforce Administrative Rule HFS 173 Tattooing and Body Piercing by inspecting and following-up on complaints regarding tattooing and body piercing establishments.

5. Provider Education

Related Objectives: 1, 10

Activities: New

The Wisconsin Hepatitis Programs will collaboratively develop and conduct an education campaign for health care providers on hepatitis prevention and detection among high risk adults that will include the following activities:

- 5-a. Sending a mailing to providers that will include:
 - Policy statements and reference materials on high risk adult hepatitis A and B vaccination and hepatitis C testing from state and national advisory groups;
 - Annual hepatitis A, B and C surveillance summaries for Wisconsin;
 - Patient education materials on hepatitis A and B vaccination and hepatitis C testing;
 - Interpretation of hepatitis serologic test results; and
 - Hepatitis case reporting requirements.
- 5-b. Collaborating with the University of Wisconsin-Madison Medical School to organize and present a statewide hepatitis conference to update health care providers on current issues related to hepatitis epidemiology, prevention, detection and treatment.
- 5-c. Posting annual hepatitis A, B and C surveillance summaries on the DHFS web site and the HAN.

- 5-d. Publishing articles on hepatitis epidemiology and programs in professional journals and newsletters.
- 5-e. The Wisconsin Immunization Program will update the Perinatal Hepatitis B Prevention Manual to provide current case management guidance to LHDs and health care providers. A section on monitoring the liver health of persons with chronic HBV infection will be added to the manual.
- 5-f. Providing hepatitis information in the context of hospital grand rounds and professional conferences.

6. Evaluation

Related Objectives: 8, 9, 10

Activities: New

- 6-a. The Wisconsin Immunization Program, in collaboration with the hepatitis B/C surveillance epidemiologist, will survey birthing hospitals to determine, among other factors, the extent to which hospitals have written policies on providing HBIG and hepatitis B vaccine to infants of HBsAg-positive women.
- 6-b. The Wisconsin Hepatitis Programs will work with hepatitis partners to create a statewide advisory group to review and guide hepatitis surveillance, prevention, detection and treatment activities in Wisconsin.

IMPLEMENTATION PLAN: HEPATITIS C

This section presents the implementation plan to decrease the incidence of hepatitis C in Wisconsin. The activities in this plan are organized by categories that are roughly equivalent to 7 of the 12 Essential Public Health Services identified in Healthiest Wisconsin 2010, the Wisconsin State Health Plan. The categories are Surveillance, Immunization or Testing, Health Education and Risk Reduction, Regulation, Provider Education, Evaluation, and Access to Care. The activities within each category are further divided into two groups: new and ongoing. The new activities are those that should be undertaken to improve the prevention, detection and treatment of hepatitis. The ongoing activities are those that have been set in place and must be continued to maintain the gains already achieved in the prevention and control of hepatitis. The related objectives are listed by number at the beginning of each activity category.

1. Surveillance

Related Objectives: 1, 2

Activities: New

- 1-a The Wisconsin Hepatitis Programs will conduct surveillance projects to determine the extent to which persons diagnosed with hepatitis are being reported to the DPH.
- 1-b The Wisconsin Hepatitis B and Hepatitis C Programs will establish and implement a system to routinely collect, summarize and report HBV and HCV mortality data.
- 1-c The Wisconsin Hepatitis B and Hepatitis C Programs will establish and implement a system to routinely collect, summarize and report data on HBV- and HCV-related liver transplants.
- 1-d The Wisconsin Hepatitis Programs will prepare, post on the DHFS web site and the HAN, and distribute hepatitis A, B and C surveillance summaries annually to LHDs, health care providers, laboratories, advisory groups and interested community-based organizations. When data are available, the surveillance summaries will include information on risk factors, co-infection rates, vaccine usage and hepatitis-associated transplants and death.
- 1-e The Wisconsin Hepatitis Programs will implement an electronic system of hepatitis case reporting when system capabilities are available at the BCD, the WSLH and other laboratories. The electronic system of case reporting will be compliant with the requirements of HIPAA.

Activities: Ongoing

- 1-f The Wisconsin Hepatitis Programs will maintain and improve electronic databases of hepatitis reports received from LHDs, laboratories and other report sources.

- 1-g The Wisconsin Hepatitis Programs will inform LHDs of hepatitis cases that occur in their jurisdictions.
- 1-h The Wisconsin Hepatitis Programs will educate LHDs, health care providers and laboratories on hepatitis reporting roles and responsibilities.
- 1-i The Wisconsin Hepatitis Programs will monitor hepatitis incidence, and provide consultation and technical assistance to LHDs and health care providers.

2. Immunization and Testing

Related Objectives: 13

Activities: New

- 2-a. The Wisconsin Hepatitis C Program will seek funds as needed to support WSLH laboratory capacity to provide HCV testing services to public sector sites.
- 2-b. The Wisconsin Hepatitis C Program will determine whether selective screening criteria can be used effectively to identify persons who should be tested for HCV.
- 2-c. The Wisconsin Hepatitis C Program will develop procedures to guide uniform integration of HCV screening, counseling, testing, and referral in public sites. The procedures will include risk assessment and counseling, specimen collection and handling, post-test counseling and referral, and confidentiality of test results.
- 2-d. The Wisconsin Hepatitis C Program, in collaboration with the AIDS/HIV Program and BCD training resources, will provide training on HCV screening, counseling, testing, and referral to public sites.

Activities: Ongoing

- 2-e. The Wisconsin Immunization Program will continue to supply federally-purchased hepatitis A and hepatitis B vaccines to LHDs for administration to persons with HCV infection who are un- or underinsured for vaccines.

3. Health Education and Risk Reduction

Related Objective: 11, 12, 13

Activities: New

- 3-a. The Wisconsin Hepatitis C Program will develop and distribute age-specific, culturally appropriate HCV prevention information materials targeted to high risk youth through the such settings as:
 - Health care clinics;
 - Juvenile correctional facilities;

- Schools, through the DPI; and
- Out-of-school settings that reach high-risk youth.
- 3-b. The Wisconsin Hepatitis C Program will work with the Bureau of Mental Health and Substance Abuse Services to integrate HCV information into Bureau-affiliated services and publications.
- 3-c. LHDs will assure that safe community needle disposal programs are established in their jurisdictions. Potential partners include local pharmacies, other city departments (e.g., public works), the private recycling industry, and the Department of Natural Resources.
- 3-d. The Wisconsin AIDS/HIV and Hepatitis C Programs will educate state policy makers with scientifically-based information related to programs that increase IDUs' access to sterile syringes and encourage identification of resources to implement these services.
- 3-e. The Wisconsin Hepatitis C Program will distribute public education materials on HCV infection risks and testing recommendations through health care providers, community clinics, LHDs, and other settings that the general public and high risk persons access.
- 3-f. The Wisconsin Hepatitis C Program will develop and distribute additional public education materials (e.g., public service announcements, bus signs, and bill boards) on HCV infection risks and testing recommendations, if funding becomes available.
- 3-g. The Wisconsin AIDS/HIV Program will fund a statewide HIV/STD/Hepatitis C information and referral center.

4. Regulation

Related Objectives: 1

Activities: New

- 4-a. The DHFS will propose a revision of Administrative Rule HFS 173 Tattooing and Body Piercing to require practitioners to obtain bloodborne pathogen and sterilization training to maintain their existing license and for new practitioners to obtain such training before receiving a license.
- 4-b. The Wisconsin Hepatitis C Program will explore the feasibility of developing an insurance mandate that would cover the treatment of hepatitis C, including

prescription drugs, and eliminate or prohibit exclusions, deductibles or co-payments related to hepatitis C treatment.

Activities: Ongoing

- 4-c. Health care providers, hospitals and laboratories will comply with HFS 145 Control of Communicable Diseases by reporting hepatitis cases to LHDs.
- 4-d. LHDs will follow-up and report cases of hepatitis to the DPH as authorized in Administrative Rule HFS 145 to provide health education, identify source of infection, determine risk of transmission, and implement control measures to prevent spread and reduce complications of hepatitis-related liver disease.
- 4-e. LHD and State sanitarians will continue to enforce Administrative Rule HFS 173 Tattooing and Body Piercing by inspecting and following-up on complaints regarding tattooing and body piercing establishments.

5. Provider Education

Related Objectives: 4

Activities: New

The Wisconsin Hepatitis Programs will collaboratively develop and conduct an education campaign for health care providers on hepatitis prevention and detection among high risk adults that will include the following activities:

- 5-a. Sending a mailing to providers that will include:
 - Policy statements and reference materials on high risk adult hepatitis A and B vaccination and hepatitis C testing from state and national advisory groups;
 - Annual hepatitis A, B and C surveillance summaries for Wisconsin;
 - Patient education materials on hepatitis A and B vaccination and hepatitis C testing;
 - Interpretation of hepatitis serologic test results; and
 - Hepatitis case reporting requirements.
- 5-b. Collaborating with the University of Wisconsin-Madison Medical School to organize and present a statewide hepatitis conference to update health care providers on current issues related to hepatitis epidemiology, prevention, detection and treatment.
- 5-c. Posting annual hepatitis A, B and C surveillance summaries on the DHFS web site and the HAN.

- 5-d. Publishing articles on hepatitis epidemiology and programs in professional journals and newsletters.
- 5-e. Distributing nationally established standards for the care of persons with HCV infection that address monitoring, treatment, mental health and emotional support.
- 5-f. Providing hepatitis information in the context of hospital grand rounds and professional conferences.

6. Evaluation

Related Objective: 15

Activities: New

- 6-a. The Wisconsin Hepatitis C Program will survey a sample of persons with HCV infection who have been followed-up by LHDs to determine case follow-up procedures and outcomes.
- 6-b. The Wisconsin Hepatitis C Program, in partnership with such agencies as the Wisconsin Primary Health Care Association and MetaStar, will facilitate development of quality improvement programs to assess and increase achievement of established external benchmarks for the care and treatment of persons with HCV infection. These programs will include use of multidisciplinary teams, tailored educational interventions and feedback to clinical staff.
- 6-c. The Wisconsin Hepatitis C Program will conduct a statewide assessment to determine the points of access and ongoing systems for identification and care of HCV infected persons.
- 6-d. The Wisconsin Hepatitis Programs will work with hepatitis partners to create a statewide advisory group to review and guide hepatitis surveillance, prevention, detection and treatment activities in Wisconsin.

7. Access to care

Related Objectives: 14, 16

Activities: New

- 7-a. The Wisconsin Hepatitis C Program, in collaboration with LHDs, will survey a sample of persons with HCV infection to:
 - Determine the percentage who lack access to medical care; and
 - Define barriers to access to medical care.

- 7-b. The Wisconsin Hepatitis C Program will develop and make available to the public a resource list of physicians who treat persons with HCV infection. The list will indicate which physicians are willing to treat patients who are in drug treatment, including methadone maintenance therapy.
- 7-c. The Wisconsin Hepatitis C Program will work to identify funding resources for health insurance and drug assistance programs.
- 7-d. If funds become available, the Wisconsin Hepatitis C Program will create a HCV health insurance premium subsidy program for low income un- and under-insured persons with HCV infection.
- 7-e. If funds become available, the Wisconsin Hepatitis C Program will create a drug assistance program to provide access to HCV-related medications for low income un- or under-insured persons with HCV infection.

Activity: Ongoing

- 7-f. The Wisconsin AIDS/HIV Program will continue to include HCV medications as a covered benefit for persons co-infected with HCV and HIV who are eligible for the Wisconsin AIDS/HIV drug assistance program.
- 7-g. The Division of Healthcare Financing's Medicaid and BadgerCare Programs will continue to cover the medical management and treatment of HCV infection as a standard of care.

APPENDIX A: HEPATITIS A IN THE U.S. AND WISCONSIN

Morbidity:

Hepatitis A is one of the most frequently reported vaccine-preventable diseases in the US. Cyclic increases in the incidence of hepatitis A have occurred approximately every decade; the last nation-wide increase occurred in 1995, the year hepatitis A vaccine was licensed. Coincident with the implementation of routine childhood hepatitis A vaccination in selected states, the number of reported hepatitis A cases fell nationally from 30,021 in 1997 to fewer than 12,000 in 2001, the lowest since the CDC began collecting these data in the 1950s (Armstrong 2002). However, reported cases of hepatitis A are an unreliable indicator of the true incidence because of infection without jaundice (especially among children) and underreporting of clinical cases. A recently published model estimates that there were approximately 270,000 infections annually between 1980 and 1999, 10.4 times the number of cases actually reported (Armstrong, 2002). The number of HAV cases reported in Wisconsin has decreased from a peak of 932 in 1992 to 89 in 2001. From 1999-2001, the mean age of Wisconsin residents reported with HAV infection was 29 years, 56% were male, and 71% were White, 18% African American, 0.6% Native American, 1.6% Asian, 2% Other and 6% unknown.

Risk factors for transmission:

HAV infection is acquired primarily by the fecal-oral route by either person-to-person contact or ingestion of contaminated food or water. On rare occasions, HAV infection has been transmitted by transfusion of blood or blood products collected from donors during the viremic phase of their infection. Because children typically have asymptomatic or unrecognized infections, they play an important role in HAV transmission by serving as a source of infection for others. Nationally, the most frequently reported source of infection (12%-26%) is either household or sexual contact with a person with HAV infection. Approximately 11%-16% of reported cases occur among children or employees in day care centers or among their contacts. An additional 4% of reported cases occur among international travelers and 2%-3% of cases are associated with recognized food or waterborne outbreaks. Approximately 50% of persons with HAV infection do not have a source identified for their infection.

Consequences of infection:

Unlike hepatitis B and hepatitis C, chronic viral carriage is not associated with HAV infection. HAV infection has a relatively low case fatality rate: 3/1,000. However, persons with chronic liver disease and adults >50 years of age are at increased risk for fulminant hepatitis A. The case fatality rate from HAV infection among adults >50 years of age is 27/1,000.

Prevention, control and treatment:

Depending on conditions, HAV can be stable in the environment for months. Careful handwashing after using the toilet, after diapering children and prior to handling food is the single most effective way to prevent the spread of HAV. Heating foods at temperatures >185° F (85° C) for 1 minute or disinfecting surfaces with a 1:100 dilution of bleach in tap water is necessary to inactivate HAV (CDC 1999).

Hepatitis A vaccine is highly immunogenic and the immunity it produces is enduring. However, it is not approved for administration to children <2 years of age because reduced immunogenicity has been observed in infants with passively acquired maternal HAV antibody. Hepatitis A vaccine should be administered at least 4 weeks before

potential exposure takes place. Preexposure hepatitis A vaccine is recommended for travelers to countries where HAV infection is prevalent, persons with chronic liver disease (including those who have hepatitis C and hepatitis B), persons who have blood clotting factor disorders, sexually active men who have sex with men, users of illegal drugs (injecting and non-injecting), persons who work or reside in institutions for the developmentally challenged, laboratory personnel who handle HAV or work with primates, and children who live in communities where the rate of HAV infection was at least twice the national average from 1987-97. The two counties in Wisconsin where the rate of HAV infection was twice the national average were Milwaukee and Sawyer. The Wisconsin Immunization Program provides federally purchased hepatitis A vaccine to tribal health clinics and to LHDs and private physicians for children who meet Vaccines for Children criteria and live in Milwaukee City. The Wisconsin Immunization Program also supplies hepatitis A vaccine to LHDs for uninsured persons with HCV infection and to some STD clinics that provide services to men who have sex with men and/or injection drug users.

Recent studies suggest that HAV infections among adults can be reduced by immunizing more children. The result of a universal childhood hepatitis A vaccination demonstration project in California was a 93.5% decline in HAV cases in the general population (Averhoff 2001). Modeling suggests that routine childhood hepatitis A immunization should have particularly strong dynamic effects ("herd immunity") and could substantially lower the incidence of HAV infection among non-immunized children and adults (Armstrong 2002).

For persons who have already been exposed to HAV, an injection of immune globulin (IG) will minimize the chances of becoming ill if it is administered within 14 days of exposure. When a case of HAV is diagnosed, IG is routinely given to the case's household and sexual contacts. If the case attends or works in a high risk setting such as a day care center or a restaurant, IG may be given to day care attendees, teachers, fellow food handlers or restaurant patrons, if warranted by the circumstances of exposure.

There are no specific medicines or antibiotics that can be used to cure HAV infection once the symptoms appear. Bed rest for several days or weeks and abstinence from alcohol until liver function returns to normal are recommended.

Cost:

The costs associated with HAV infection are substantial. Between 11% and 22% of persons who have hepatitis A are hospitalized. Adults who become ill lose an average of 27 days of work per episode of illness. Health departments incur substantial costs providing postexposure prophylaxis to an average of 11 contacts per case. Surveys performed in 1990 and 1991 determined that average costs (direct and indirect) of hepatitis A range from \$1,817 to 2,459 per case for adults and from \$433 to \$1,492 per case for children <18 years of age (CDC 1999). As of May 2002, the average per dose cost of hepatitis A vaccine in the private sector is \$56 for the adult formulation and \$28 for the pediatric formulation. The average per dose cost of hepatitis A vaccine in the public sector is \$17 for the adult formulation and \$11 for the pediatric formulation.

APPENDIX B: HEPATITIS B IN THE U.S. AND WISCONSIN

Morbidity:

An estimated 1 – 1.25 million persons in the U.S. have chronic hepatitis B virus (HBV) infection, and 200,000 – 300,000 new infections occurred annually from 1980-1991. However, recent national data from enhanced acute HBV surveillance indicate that the incidence of HBV infection is decreasing. From 1982 to 1998, the reported incidence of acute HBV infection declined by 76.1% from 13.8 cases/100,000 in 1987 to 3.3 cases/100,000 in 1998. During 1994-98, the most commonly reported risk factor for infection was high risk heterosexual activity (39.8%) followed by men having sex with men (MSM) activity (14.6%) and injecting drug use (13.8%). Over half of all patients reported treatment for a sexually transmitted disease or incarceration in a prison or jail prior to their illness. This suggests that more than half of the acute HBV cases might have been prevented through routine HBV immunization in STD clinics and correctional health programs (Goldstein 2002). The number of acute and chronic HBV cases reported in Wisconsin peaked at 848 in 1992. From 1999-2001, an average of 583 cases of HBV infection, of which 49 were classified as acute disease, was reported annually. The average age of persons reported with HBV infection during this time frame was 37 years, 53% were male, and among the 54% of cases where race was reported, 43% were Asian, 31% White, 25% African American, and <1% Native American, Other and unknown. These data suggest that there is an excess of HBV infection among Asians and African Americans. However, the racial data should be interpreted cautiously since race was unknown for 46% of cases during this time period.

Risk factors for transmission:

HBV is transmitted by contact with blood, serum, semen, vaginal fluids and, rarely, saliva. Several specific modes of transmission have been identified, including sexual contact, especially among men who have sex with men and multiple heterosexual partners, injection drug use, occupational exposures, household contact with an infectious person, receipt of certain blood products, hemodialysis, and perinatal exposure to HBV-infected mothers. The risk of perinatal HBV transmission ranges from 10% to 85%, depending on the mother's hepatitis B e antigen status.

Consequences of infection:

The likelihood of developing chronic HBV infection is related to age at the time of infection: the younger the age, the greater the risk. Chronic HBV infection develops in 80-90% of infants infected during the first year of life, in 30-50% of children infected between 1-5 years of age and in 5-10% of people infected after 6 years of age. People with chronic HBV infection are a reservoir of infection for others and 15-25% may die prematurely of cirrhosis or liver cancer. Each year, approximately 4,000-5,000 persons die of HBV-related chronic liver disease in the U.S.

Prevention, control and treatment:

Immunization with hepatitis B vaccine is the most effective means of preventing HBV infection and its consequences. The vaccine is recommended for all infants, children, adolescents and high risk adults. High risk adults include inmates of long term correctional facilities; injection drug users; sexually active men who have sex with men; men and women with >1 partner in the previous 6 months, a history of an STD, or treatment in an STD clinic; household contacts (including cellmates) and sex partners of persons with chronic HBV infection; Persons in occupational groups with exposure to blood or body fluids; hemodialysis patients; recipients of clotting factor concentrates; long-

term international travelers; and clients and staff on institutions for the developmentally disabled (CDC 2003). The OSHA Bloodborne Pathogen standard requires that employers provide hepatitis B vaccine to employees who are likely to have exposure to blood in the workplace. Hepatitis B vaccine is required by administrative rule HFS 145 for children in day care centers and schools. In 2004, all grades will be covered by the requirement. The Wisconsin Immunization Program provides federally purchased pediatric hepatitis B vaccine to LHDs, private physicians and state juvenile correctional facilities for children who meet Vaccines for Children criteria. Additionally, the Wisconsin Immunization Program supplies adult hepatitis B vaccine to state adult correctional institutions, selected public STD programs and LHDs for administration to uninsured high risk clients.

For persons who have already been exposed to HBV, an injection of hepatitis B immune globulin (HBIG) will minimize the chances of becoming ill, if it is administered within the appropriate time frame. HBIG is typically given to infants born to infectious mothers, health care workers who sustain a significant exposure to infectious blood and have not responded to, or have refused, hepatitis B vaccine and to sex partners and infant household contacts of persons with acute HBV infection.

The FDA has approved three drugs for treatment of chronic HBV infection: interferon, lamivudine, and adefovir dipivoxil. The patient's age, the severity of liver disease, the likelihood of a response and potential adverse effects are considered before treatment is initiated. Treatment is not indicated for those in the inactive carrier state (hepatitis B surface antigen positive, hepatitis B e antigen negative). A 3 to 6 month course of interferon is associated with a response rate of 30%-40% (Lok 2002). The rate of response in children is similar to that in adults. National recommendations on treatment and medical management of persons with chronic HBV infection have not been published.

Cost: The expected direct medical costs associated with acute and chronic HBV infection for one U.S. birth cohort are estimated to be \$81.9 million. The estimated cost per discounted year of life saved is \$2,701-\$31,168 for a program to prevent perinatal HBV infection, \$20,619-\$68,528 for a routine infant vaccination program and \$27,919-\$90,503 for an adolescent vaccination program (Margolis 1995). This compares with the cost of treating hypertension (\$22,600 per year of life saved), the cost of renal dialysis (\$35,000 to \$45,000 per year of life saved), and the cost of mammography screening in women younger than age 50 (\$67,367 per year of life saved) (Everett, 1996). As of May 2002, the average per dose cost of hepatitis B vaccine in the private sector is \$54 for the adult formulation and \$23 for the pediatric formulation. The average per dose cost of hepatitis B vaccine in the public sector is \$24 for the adult formulation and \$10 for the pediatric formulation.

APPENDIX C: HEPATITIS C IN THE U.S. AND WISCONSIN

Morbidity:

Hepatitis C virus (HCV) infection is the most common chronic bloodborne infection in the U.S. An estimated 3.9 million (1.8%) persons in the U.S. have been infected with HCV, of whom 90,000 may live in Wisconsin. The number of HCV infections reported to the Wisconsin HCV Program increased 5-fold from approximately 800 cases in 1997 to over 4,200 cases in 2002. This trend represents an increase in the detection of chronic cases acquired in the past, not an increase in newly acquired cases. Aside from some sexually transmitted diseases, HCV is currently one of the most frequently reported communicable disease in Wisconsin. From 1999-2001, the average age of persons reported with HCV infection was 44 years, 67% were male, and among the 46% of cases where race was reported, 72% were White, 25% African American, 2% Native American and <1% Asian and other races.

Risk factors for transmission:

Hepatitis C virus (HCV) is transmitted primarily by percutaneous exposure to blood. Injection drug use currently accounts for most HCV transmission in the U.S. and has accounted for a substantial proportion of HCV infections in past decades. Other factors associated with transmission include receiving a transfusion or organ transplant before 1992, receiving long-term hemodialysis or receiving clotting factor produced before 1987. The average prevalence of HCV infection varies by population and is estimated to be 79% among current injection drug users, 6% among persons who received a blood transfusion before 1990, 10% among hemodialysis patients, and 87% among persons with hemophilia treated with clotting factor concentrate before 1987. HCV is less efficiently transmitted between sexual partners or from mother to infant. The average rate of HCV infection among long term spouses of patients with HCV is 1.5%. Fifteen to 20% of patients with acute hepatitis C reported to the Centers for Disease Control and Prevention's (CDC's) sentinel counties surveillance system have a history of sexual exposure in the absence of other risk factors. The average rate of HCV infection is 5% among infants born to HCV-positive women and 14% among infants born to women coinfecting with HCV and HIV.

Consequences of infection:

Chronic infection develops in 75%-85% of persons who acquire HCV infection. The course of chronic liver disease is usually insidious, progressing at a slow rate without symptoms or physical signs in most patients. Over 20-30 years, cirrhosis develops in 10%-20% and primary hepatocellular carcinoma develops in 1%-5% of chronically infected persons. HCV-associated end-stage liver disease is the most frequent indication for liver transplantation among adults and the number of deaths in the US attributable to HCV infection, currently 8,000-10,000, could increase substantially during the next 10 –20 years as the infected population ages. In 1998, 50 hepatitis C-related deaths were reported in Wisconsin. Increased alcohol intake, being more than 40 years of age at time of infection, or being male is associated with more severe liver disease. Among persons with alcoholic liver disease and HCV infection, liver disease progresses more rapidly and is possibly attributed to alcohol-induced enhancement of viral replication or increased susceptibility of cells to viral injury. HCV infection also progresses more rapidly to liver damage in persons who are co-infected with HIV or HBV. About one quarter of HIV-infected persons in the U.S. also have HCV infection. Lastly, persons with chronic liver disease are at increased risk for fulminate hepatitis A.

Prevention, control and treatment:

Preventing HCV infection and reducing HCV-related disease requires implementation of primary prevention activities that reduce risks for contracting HCV infection and secondary prevention activities that reduce risks for liver and other chronic diseases in HCV-infected persons. Primary prevention activities include screening and testing of blood, plasma, organ, tissue and semen donors; virus inactivation of plasma-derived products; risk-reduction counseling and services; and implementation and maintenance of infection control practices. Secondary prevention activities include identification, counseling and testing of persons at risk, and medical evaluation and management of infected persons. Medical evaluation for HCV infection includes an assessment for the presence and severity of chronic liver disease, the need for treatment and for hepatitis A and B vaccinations.

Treatment is recommended for persons with chronic hepatitis C who are at greatest risk for progression to cirrhosis. The current treatment of choice, pegylated interferon and ribavirin, results in a sustained virological response for more than 40% of patients with genotype 1 and 80% of patients with genotype 2 or 3 (70% of HCV infections in the U.S. are genotype 1) (Manns 2001). The cost of a 48-week course of treatment with pegylated interferon and ribavirin ranges from approximately \$24,000 to \$32,000 (Franciscus 2003). The manufacturers, Schering and Roche, will supply free drugs to persons who are uninsured and unable to pay. However, drug assistance programs do not cover costs associated with provider visits and laboratory tests that are necessary to monitor treatment response and adverse reactions. Drug assistance programs also do not provide medications to uninsured persons with modest incomes or to insured persons with high deductibles. It is possible that continued improvements in antiviral therapy against HCV infection may ultimately decrease the number of patients needing liver transplantation (Ahmed 2001). Some research suggests that antiviral therapy may reduce the disease burden from HCV infection by 5% (Sagmeister 2002).

Cost:

The costs of HCV infection in direct medical expenditures during 1997 were estimated at \$1.8 billion (Leigh 2001). Similarly, a computer simulation model has projected that, from 2010 through 2019, the direct medical expenditures for HCV will be \$10.7 billion (Wong 2000). The cost per quality-adjusted life-year gained for combination therapy with interferon and ribavirin compared to no therapy is \$5,490 (Stein 2002). American society generally accepts treatments as appropriate if they cost less than about \$50,000 per quality-adjusted life-year gained (Deyo 2000). No studies have been published on the cost effectiveness of screening high risk persons for HCV or for treatment of chronic HCV infection with pegylated interferon and ribavirin.

APPENDIX D: SUMMARY OF THE STRATEGIC PLANNING PROCESS

Selection of Strategic Planning Workgroup:

- Strategic Planning Workgroup members were selected on the basis of their exceptional knowledge of and interest in hepatitis A, B or C. Diversity in area of expertise, private or public sector affiliation and geographic location also guided the selection process.
- Members of the Workgroup represented the following fields: state and local public health, including AIDS/HIV, immunization, sexually transmitted diseases; occupational health, environmental health; gastroenterology, pediatrics, advanced practice nurse practitioners, infection control, laboratory, health care finance, public and health care provider education, drug treatment, corrections, epidemiology, advocacy, and blood collection.

Identification of underlying risk factors:

- Prior to the first meeting of the Workgroup, state hepatitis program experts identified underlying risk factors for hepatitis A, B and C, based on the literature, experience and statewide data.
- Worksheets listing the risk factors were sent to the Workgroup members. The members were asked to give their expert opinion on how much each risk factor currently contributes to the occurrence of each type of hepatitis by distributing 100 points among the risk factors.
- The hepatitis risk factor scores were summarized and ranked in importance, based on the mean scores.
- The most important risk factor for hepatitis A was being a household or childcare contact of a HAV case; for hepatitis B, being a sexual contact of a HBV case; and for hepatitis C, having percutaneous exposure to HCV through injection drug use.
- At the first meeting, the hepatitis risk factor score summaries were presented to the Workgroup members.

Development of the mission, vision and guiding principles

- At the first meeting, using nominal group process, the Workgroup members state how they would know that the Wisconsin hepatitis strategic planning process had been successful. Their statements were used to craft the mission, vision and guiding principles.

Identification of interventions

- Members of the Workgroup were subdivided into three smaller groups. Each group identified interventions for the most important risk factors for hepatitis A, B and C.
- The smaller groups rotated from one type of hepatitis to the next until each group had had an opportunity to identify interventions for each type of hepatitis.

Use of the logic model implementation planning tool:

- The logic model is a graphic representation of a program that explains the program and what it is supposed to accomplish. It displays a chain of events that will effect changes and achieve the program's vision. The components of the logic model - inputs (what we invest), outputs (what we do and who we reach), and outcomes (results or changes) – are linked together in a series of if-then relationships.
- The Workgroup created and used a logic model as the framework to organize the ideas of the workgroup, develop measurable objectives, and refine the elements of the implementation plan.

APPENDIX E: LINKAGES TO HEALTHIEST WISCONSIN 2010

Health Priorities

The Wisconsin Turning Point initiative developed *Healthiest Wisconsin 2010: A Partnership Plan to Improve the Health of the Public*. *Healthiest Wisconsin 2010* identifies 11 health priorities that reflect the underlying causes of hundreds of diseases and health conditions affecting the Wisconsin population. The Wisconsin Hepatitis Strategic Plan addresses the Existing, Emerging and Re-emerging Communicable Diseases health priority.

Health Conditions

Healthiest Wisconsin 2010 health priorities were identified through a stepwise process that determined which risk factors had the greatest effect on health. The process consisted of the following four steps: identification of major health conditions, prioritization of major health conditions, identification of risk factors, and prioritization of risk factors. Hepatitis B and hepatitis C were among the 54 priority health conditions identified in *Healthiest Wisconsin 2010*.

Risk Factors

The process the Hepatitis Strategic Planning Workgroup used to select the salient risk factors for hepatitis A, B and C was modeled after the process developed by *Healthiest Wisconsin 2010* planners to prioritize risk factors. Risk was quantified by distributing 100 points among the risk factors and averaging the scores.

Essential Public Health Services

Healthiest Wisconsin 2010 also identifies 12 essential public health services that must be in place to sustain a strong public health system. Accountability for these services is shared among all the public health system partners, including state and local public health agencies, health care providers, community-based organizations and advocacy organizations. The activities in the Implementation Plan of the Wisconsin Hepatitis Strategic Plan are organized by the following 7 of the 12 essential public health services: (the words in parentheses indicate how these services are referenced in the Plan).

1. Monitor health status and identify community health problems. (Surveillance)
2. Identify, investigate, control and prevent health problems and environmental health hazards in the community. (Immunization or Testing)
3. Educate the public about current and emerging health issues. (Health Education and Risk Reduction)
4. Enforce laws and regulations that protect health and ensure safety. (Regulation)
5. Assure a diverse, adequate and competent workforce to support the public health system. (Provider Education)
6. Evaluate effectiveness, accessibility and quality of personal and population-based health services. (Evaluation)
7. Assure access to primary health care for all. (Access to Care)

APPENDIX F: GLOSSARY OF TERMS

Advisory Committee on Immunization Practices (ACIP). A committee of 15 experts in fields associated with immunization who have been selected by the Secretary of the U.S. Department of Health and Human Services to provide advice and guidance to the Secretary, the Assistant Secretary for Health, and the Centers for Disease Control on the most effective means to prevent vaccine-preventable diseases.

Bureau of Communicable Diseases (BCD). The Bureau in the DPH, DHFS that is primarily responsible for communicable disease prevention and control in Wisconsin. The Hepatitis Programs are within the BCD.

Council of State and Territorial Epidemiologists (CSTE). An organization for state-based and other epidemiologists that promotes the effective use of epidemiologic data to guide public health practice and improve health.

Counseling, training and referral (CTR) sites. Agencies that offer HIV counseling, testing and referral services to individuals at risk for HIV infection. The majority of these agencies are LHDs and community health centers.

Department of Health and Family Services (DHFS). The cabinet level agency primarily responsible for health and social service issues in Wisconsin. DPH is within the DHFS.

Division of Public Health (DPH). The agency primarily responsible for public health issues in Wisconsin. The BCD is within the DPH.

Health Alert Network (HAN). A communications system for Wisconsin's local health departments, hospitals, clinics, emergency rooms, laboratories, law enforcement, fire service, EMS, volunteer and other health agencies. Its goal is to improve the communications infrastructure for all Wisconsin public health agencies and their partners.

Hepatitis A Virus (HAV). The virus that causes hepatitis A. Most often transmitted by fecal-oral contact.

Hepatitis A vaccine. An inactivated vaccine that induces protective antibody in 94-100% of adults one month after the first dose.

Hepatitis B immune globulin (HBIG). Contains high titer antibodies to HBV. Given after exposure to prevent infection.

Hepatitis B surface antigen (HBsAg). The marker of HBV infectivity. Its presence indicates either acute or chronic HBV infection.

Hepatitis B vaccine. An inactivated vaccine that induces protective antibody in >90% of healthy adults and >95% of infants, children and adolescents 1-6 months after completion of the 3-dose vaccine series.

Hepatitis B Virus (HBV). The virus that causes hepatitis B. In the U.S., most often transmitted by sexual contact.

Hepatitis C Virus (HCV). The virus that causes hepatitis C. Most often transmitted by percutaneous contact with blood.

High risk groups for HAV infection:

The ACIP recommends hepatitis A vaccine for:

- Persons who work in or travel to areas where hepatitis A is common (first dose should be given at least 4 weeks before travel).
- Children in states and countries with constant increased rates of hepatitis A.
- Men who have sex with men
- Persons who use street drugs
- Persons with clotting factor disorders, such as hemophilia
- Persons who work with HAV-infected animals or work with HAV in a research setting (hepatitis A vaccine is not generally recommended for health care workers).

The Wisconsin Immunization Program will establish eligibility criteria for receipt of publicly purchased hepatitis A vaccine from public sector sites.

High risk adults for HBV infection:

In addition to all infants, children and adolescents, the ACIP recommends hepatitis B vaccine for:

- Hemodialysis patients
- Patients who receive clotting-factor concentrates
- Health-care workers and public-safety workers who have exposure to blood in the workplace
- Persons in training in schools of medicine, dentistry, nursing, laboratory technology, and other allied health professions
- Injecting drug users
- Persons with more than one sex partner in the previous 6 months
- Persons with a recently acquired sexually-transmitted disease (STD)
- All clients in STD clinics
- Men who have sex with men
- Household contacts and sex partners of persons with chronic HBV infection
- Clients and staff of institutions for the developmentally disabled
- International travelers who will be in countries with high or intermediate prevalence of chronic HBV infection for more than 6 months
- Inmates of correctional facilities.

The Wisconsin Immunization Program will establish eligibility criteria for receipt of publicly purchased hepatitis B vaccine from public sector sites.

High risk groups for HCV infection:

The Centers for Disease Control recommends hepatitis C testing for:

- Persons who were notified that they received blood from a donor who later tested positive for hepatitis C.
- Persons who ever injected illegal drugs, even a few times many years ago
- Persons who received a blood transfusion or solid organ transplant before July, 1992
- Persons who received a blood product for clotting problems produced before 1987
- Persons who have ever been on long-term kidney dialysis
- Persons who have evidence of liver disease (e.g., persistently abnormal ALT levels)
- Persons who have HIV

The Wisconsin Hepatitis C Program has also determined that persons who have exchanged sex for drugs or money and persons who are sex partners of persons with HCV infection or IDUs are also at risk of HCV infection. The Hepatitis C Program will establish eligibility criteria for receipt of publicly purchased hepatitis C testing from public sector sites.

Health Insurance Portability and Accountability Act (HIPAA). Public Law 104-191 whose purposes are to amend the Internal Revenue Code of 1986 to improve portability and continuity of health insurance coverage in the group and individual markets, to combat waste, fraud, and abuse in health insurance and health care delivery, to promote the use of medical savings accounts, to improve access to long-term care services and coverage, to simplify the administration of health insurance, and for other purposes. The HIPAA Privacy rule permits covered entities to disclose protected health information, without authorization, to public health authorities who are legally authorized to receive such reports for the purpose of preventing or controlling disease, injury, or disability.

Human Immunodeficiency Virus (HIV). The virus that causes Acquired Immune Deficiency Syndrome.

Local Health Department (LHD). An agency of local government that has statutory authority to conduct surveillance, investigation, control and prevention of communicable diseases, other disease prevention, health promotion and human health hazard control.

Public sector sites. In the Plan, public sector sites are STD clinics, AIDS/HIV CTR sites, LHDs, drug treatment programs, correctional health programs, family planning clinics and community health centers.

Sexually Transmitted Disease (STD). An infection transmitted through sexual contact such as chlamydia, gonorrhea or hepatitis B.

Vaccine for Children Program (VFC). A federally funded vaccine supply program that provides free vaccine for children 0-18 years of age who are enrolled in Medicaid, do not have health insurance, are Native Americans or have health insurance that does not include immunizations if vaccine is provided by a Federally Qualified or Rural Health Center.

Wisconsin Council on Immunization Practices (WCIP). A group of immunization experts from the private and public sectors that advises the Wisconsin Immunization Program on the development of coordinated sustainable vaccine delivery policies on recommended age-appropriate immunizations.

Wisconsin Immunization Registry (WIR). A computerized internet database application used to track immunization records of patients from infancy through adulthood.

Wisconsin State Laboratory of Hygiene (WSLH). Wisconsin's public health laboratory that performs tests for hepatitis A, B and C.

Workgroup. A group of 32 experts who contributed to the development of the Wisconsin Hepatitis Strategic Plan. The experts represented state and local public health (including epidemiology, AIDS/HIV, immunization, sexually transmitted diseases, occupational health, and environmental health); gastroenterology; pediatrics; advanced practice nurse

practitioners; infection control; clinical laboratorians; health care finance; general public and health care provider education; drug treatment; corrections; consumer advocacy; and blood collection

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